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REPORT OF EXPERIMENTS

Made at the College Poultry Farm, Theale, Berks, July to November, 1905,

ON

The Rearing and Feeding of Turkeys.

Issued January, 1906.

EXPERIMENTS AND OBSERVATIONS ON

The Rearing and Feeding of Turkeys.

Object.—Of the different species of poultry it is generally accepted that the Turkey is most difficult to rear, that the young birds require special care during the earlier stages of growth, and that they must be supplied with a highly nitrogenous diet. So firmly established is this opinion that the production of these fowls is undertaken by few farmers, in spite of a large and increasing demand at the Christmas season. It has been claimed that only those should attempt the work who can allow their turkeys, old and young, to live and breed in woods under natural conditions. That, however, would mean that farmers living in suitable districts would lose a lucrative branch of their live stock.

The success which has attended the system of dry feeding for chickens, by reason of the greater vigour in the young birds obtained as a result of exercise (1), has led to an experiment at the College Poultry Farm, Theale, during the past year with the object of seeing whether that method is equally beneficial for young turkeys, and how far they can be reared artifically.

Hatching and Rearing.—In May, 1905, forty-eight turkey eggs were placed in an incubator, none of which proved to be fertile.

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(1) Vide Reports on "The Growth of Chickens and Cost of Rearing," 1904 and 1905, published by the University College, Reading.

On July 6th, 1905, twenty eggs (1) were placed under two broody hens, of which 19 hatched on August 3rd. Two of these were weakly from the first. One died on August 11th, and the other on September 20th. Three others made very slow growth, and were killed on October 13th.

The nineteen turkey chicks were placed in an ordinary outdoor brooder, with covered run, in which they remained for four weeks, when (September 1st) they were placed in section of winter brooder house, sleeping in a cold brooder. Attached to the house is a large run, part of which was in grass and part planted with cabbage, to which they had access and consumed a considerable portion.

On October 14th the cold brooder was removed, and a week later the turkeys were divided in accordance with their sexes, and placed in open fronted scratching sheds with large grass runs, where they remained until the end of the experiment.

Food and Feeding.—For the first three weeks and two days (until August 27th) the birds were supplied with dry feed A (2)., scattered among the cut chaff littered on the floor of run, with the addition of meat (Spratt's Crissel), and an abundant supply of green food in the shape of lettuce and onion, of which they ate freely. During this and the succeeding periods they consumed large quantities of grit, and had a supply of fresh water.

On August 27th it was found desirable to give soft food, as some of the birds began to show slight leg weakness. One feed per diem was given of Spratt's Poultry Meal with about 15 per cent. of Crissel, and on August

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(1) Obtained from the Ridgemont Farm School for this purpose.

(2) See Reports as above.

30th two feeds per diem of that food was given, and continued, with the dry feed A until September 15th, when for it was substituted a mixture of equal parts of ground oats, barley meal and toppings, with 15 per cent. of Crissell, prepared with boiling water, and continued to the end. At that time dry feed B was supplied in place of the other. At this stage cabbage was given instead of lettuce, and onions were chopped fine and mixed with the soft food. When the soft food was first given the birds would not eat it, but they were tempted by cut onion scattered over it, which was discontinued in that form at the end of two days, when the purpose had been accomplished. On October 27th, barley, wheat and a little cracked maize were substituted for mixture B.

As the object of the experiment was not to test the cost, but to see how far artificial rearing and dry feeding can be applied to turkeys, records were not kept as to quantities of food consumed.

Growth.—The fortnightly growth of the birds is shown in the following table:—

TABLE I.

AVERAGE FORTNIGHTLY WEIGHTS AND INCREASES.

Fortnight ending.	No. of Birds.	Total Weights.	Total gain in Weight.	Average Weights.	Average Fortnightly gain in Weight.	Total Average gain in Weight to date.
1905.		oz.	oz.	oz.	oz.	oz.
August 4 ..	19	39	—	2·05	—	—
,, 18 ..	18	78	39	4·33	2·17	2·17
September 1 ..	18	183	144	10·16	5·83	8·0
,, 15 ..	18	356	317	19·77	9·61	17·61
,, 29 ..	17	516	477	30·35	9·41	28·05
October 13 ..	17	784	745	46·11	15·76	43·82
,, 27 ..	14	1064	1025	76·0	20·0	73·21
November 16 ..	14	1460	1421	104·28	28·28	101·5

It will be seen from Table I that the total gain in weight in the first four weeks was exactly 9 lbs.; in the second four weeks was 20 lbs. 13 ozs.; in the third four weeks was 34 lbs. 4 oz.; and in the final 20 days was 24 lbs. 12 oz., or a total gain in 104 days of 88 lbs. 13oz. These weights allow for loss of birds which died or were killed.

The individual weights of the birds on November 16th are shown in Table II, divided into the sexes, of which there were three males and 11 females. On that day fattening commenced for killing.

TABLE II.

INDIVIDUAL WEIGHTS OF TURKEYS AT 15 WEEKS OLD.

No.	Sex.	Weights.	
		lbs.	ozs.
1	Male	9	0
2	,,	7	4
3	,,	6	0
4	Female	7	8
5	,,	6	8
6	,,	6	8
7	,,	6	8
8	,,	6	8
9	,,	6	8
10	,,	6	8
11	,,	6	0
12	,,	6	0
13	,,	5	12
14	,,	4	12

Thus the greatest gain in males was 8 lb. 13·95 oz., and the least 5 lb. 13·95 oz.; and in females the greatest gain was 7 lb. 5·95 oz., and the least 4 lb. 9·95 oz.

Conclusions.—This experiment cannot be regarded as conclusive either as to the success of the artificial method of rearing or the dry system of feeding, and it will be necessary to make further observations. It, however, affords sufficient encouragement to justify the anticipation that these may prove of value in determination as to whether (1) young turkeys can be reared successfully in brooders, and (2) how far the system of feeding generally followed for these birds can be modified in the direction of compelling exercise in seeking for food. The loss of five birds (equal to 26·3 per cent.) by death or having to be killed as a result of weakness or slowness of development, cannot be regarded as satisfactory, though it is probably not in excess of the average loss of birds reared naturally. Comparative observations would be necessary to afford exact information on that point.

The experiment recorded above does not enable us to form any judgement as to the hatching of turkey chicks by incubators, as, unfortunately, all the eggs tried in that way proved infertile.

No conclusions can be formed as to size of birds reared owing to the late period at which they were hatched (August 3rd), and that the period of growth did not extend beyond 15 weeks. But in that time the average gain was nearly 6 lb. 3½ oz.

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January, 1906.